

No.

8900010



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## Nickerson American Plant Breeders, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE  
**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (ACT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'AP 1989'

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D. C. this 28th day of April in the year of our Lord one thousand nine hundred and eighty-nine.*

Attest:

*Kenneth A. Evans*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Clayton Yeutter*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Nickerson American Plant Breeders		2. TEMPORARY DESIGNATION	3. VARIETY NAME AP 1989
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 5201 Johnson Drive P.O. Box 2955 Mission, KS 66205		5. PHONE (Include area code) (913) 384-4940	FOR OFFICIAL USE ONLY PVPO NUMBER 8900010
6. GENUS AND SPECIES NAME Glycine max	7. FAMILY NAME (Botanical) Leguminosae		FILING DATE October 14, 1988 TIME 9:30 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.
8. KIND NAME Soybean	9. DATE OF DETERMINATION January 1985		AMOUNT FOR FILING \$ 1800.00 DATE Aug. 22, 1988
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation		FEES RECEIVED AMOUNT FOR CERTIFICATE \$ 200.00 DATE Feb. 16, 1989	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware		12. DATE OF INCORPORATION	

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS  
Wayne Ellingson, Director of Oilseeds Research  
AgriPro Seeds  
R.R. #2, Hwy 30 East  
Ames, Iowa 50010  
PHONE (Include area code): (515) 232-0691

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

- a.  Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- b.  Exhibit B, Novelty Statement.
- c.  Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)
- d.  Exhibit D, Additional Description of Variety.
- e.  Exhibit E, Statement of the Basis of Applicant's Ownership.

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.)  
 Yes (If "Yes," answer items 16 and 17 below)  No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?  
 Yes  No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?  
 Foundation  Registered  Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?  
 Yes (If "Yes," give date)  
 No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?  
A small quantity, less than 500 bags, was sold in the U.S. during the spring of 1988.  Yes (If "Yes," give names of countries and dates)  
 No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.  
The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.  
Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT <i>Wayne R. Ellingson</i>	DATE August 8, 1988
SIGNATURE OF APPLICANT <i>R. E. Henn</i>	DATE 8-10-88

"EXHIBIT A"  
ORIGIN AND HISTORY OF "AP 1989"

1. AP 1989 originated in Iowa during the summer of 1978. It was derived from the hand pollinated cross of 'AgriPro 26' and 'Vickery'. The F1, F2 and F3 generations were grown in Brazil during the fall of 1978, winter 1978-79 and summer of 1979, respectively. The F4 generation was grown in Iowa during the summer of 1980. Early generations were advanced using a modified single seed descent technique. Single plants of the cross were selected in the F4 generation and the seed was planted as a progeny row in Iowa the summer of 1981.
2. In 1983, single plants of the variety were reselected and grown in progeny rows in 1984. Only rows conforming to a standard were harvested and bulked. Because of latent segregation for Phytophthora resistance, the process was repeated in 1984 and the susceptible and segregation rows were discarded. The genetic make-up of the variety was stabilized in the seventh generation (1984). The variety has remained stable since the reselection. The purpose of the reselection was for beginning multiplication for seed stock production. The variety was not essentially changed, but only the latent segregate for Phytophthora susceptibility and the mixtures which occurred during yield testing were removed.
3. AP 1989 has been yield tested since 1982. See attached for 1983-1987 data. AP 1989 has been tested under the experimental designations 78048-A81-24060 and EX 1989.
4. Discernible variants are not an inherent component of the variety.

**"EXHIBIT B"**

Novelty is based on the unique combination of the following characters:

AP 1989 is most similar to the variety "Vickery". However, AP 1989 differs from Vickery in iron chlorosis resistance and metribuzin sensitivity.

1. AP 1989 shows good resistance to iron deficiency chlorosis when grown on soils high in pH. The variety has only slight yellowing while Vickery, a susceptible variety, turns completely yellow.
2. AP 1989 is moderately tolerant to the bread leaf herbicide metribuzin where Vickery is moderately sensitive.

U.S. DEPARTMENT OF AGRICULTURE  
 AGRICULTURAL MARKETING SERVICE  
 LIVESTOCK, MEAT, GRAIN & SEED DIVISION  
 PLANT VARIETY PROTECTION OFFICE  
 BELTSVILLE, MARYLAND 20705

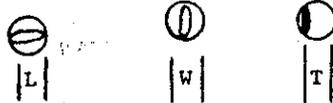
EXHIBIT C  
 (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY  
 SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Nickerson American Plant Breeders	TEMPORARY DESIGNATION	VARIETY NAME AP 1989
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 5201 Johnson Drive Mission, KS 66205		FOR OFFICIAL USE ONLY PVPO NUMBER 8900010

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,  ). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)  
 3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)  
 4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

1 = Yellow    2 = Green    3 = Brown    4 = Black    5 = Other (Specify) \_\_\_\_\_

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton')    2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

1 = Buff    2 = Yellow    3 = Brown    4 = Gray    5 = Imperfect Black    6 = Black    7 = Other (Specify) \_\_\_\_\_

★ 6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow    2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low    2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1<sup>a</sup>)    2 = Type B (SP1<sup>b</sup>)

★ 9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis')    2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')  
 3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')  
 4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ 10. LEAFLET SHAPE:

1 = Lanceolate    2 = Oval    3 = Ovate    4 = Other (Specify) \_\_\_\_\_

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11. LEAFLET SIZE:

- 1 = Small ('Amsoy 71'; 'A5312')      2 = Medium ('Corsoy 79'; 'Gasoy 17')
- 2      3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

- 1 = Light Green ('Weber'; 'York')      2 = Medium Green ('Corsoy 79'; 'Braxton')
- 2      3 = Dark Green ('Gnome'; 'Tracy')

★ 13. FLOWER COLOR:

- 1 = White      2 = Purple      3 = White with purple throat

★ 14. POD COLOR:

- 1 = Tan      2 = Brown      3 = Black

★ 15. PLANT PUBESCENCE COLOR:

- 1 = Gray      2 = Brown (Tawny)

16. PLANT TYPES:

- 1 = Slender ('Essex'; 'Amsoy 71')      2 = Intermediate ('Amcor'; 'Braxton')
- 2      3 = Bushy ('Gnome'; 'Govan')

★ 17. PLANT HABIT:

- 1 = Determinate ('Gnome'; 'Braxton')      2 = Semi-Determinate ('Will')
- 3      3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ 18. MATURITY GROUP:

- 0    4   1 = 000   2 = 00   3 = 0   4 = I   5 = II   6 = III   7 = IV   8 = V
- 9 = VI   10 = VII   11 = VIII   12 = IX   13 = X

★ 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

- ★  0 Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)
- ★  0 Bacterial Blight (*Pseudomonas glycinea*)
- ★  0 Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

- ★  0 Brown Spot (*Septoria glycines*)
- Frogeye Leaf Spot (*Cercospora sojina*)
- ★  0 Race 1    0 Race 2    0 Race 3    0 Race 4    0 Race 5    0 Other (Specify)
- 0 Target Spot (*Corynespora cassicola*)
- 0 Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)
- 0 Powdery Mildew (*Microsphaera diffusa*)
- ★  0 Brown Stem Rot (*Cephalosporium gregatum*)
- 0 Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

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19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

- ★  0 Pod and Stem Blight (*Diaporthe phaseolorum* var; *sojae*)
- 0 Purple Seed Stain (*Cercospora kikuchii*)
- 0 Rhizoctonia Root Rot (*Rhizoctonia solani*)
- Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
- ★  2 Race 1     2 Race 2     2 Race 3     1 Race 4     1 Race 5     2 Race 6     2 Race 7
- 2 Race 8     2 Race 9     Other (Specify) Resistant to 10,11,13,15,17,21,23&24

VIRAL DISEASES:

- 0 Bud Blight (Tobacco Ringspot Virus)
- 0 Yellow Mosaic (Bean Yellow Mosaic Virus)
- ★  0 Cowpea Mosaic (Cowpea Chlorotic Virus)
- 0 Pod Mottle (Bean Pod Mottle Virus)
- ★  0 Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)
- ★  1 Race 1     1 Race 2     1 Race 3     1 Race 4     Other (Specify) \_\_\_\_\_
- 0 Lance Nematode (*Hoplolaimus Colombus*)
- ★  0 Southern Root Knot Nematode (*Meloidogyne incognita*)
- ★  0 Northern Root Knot Nematode (*Meloidogyne Hapla*)
- 0 Peanut Root Knot Nematode (*Meloidogyne arenaria*)
- 0 Reniform Nematode (*Rotylenchulus reniformis*)
- OTHER DISEASE NOT ON FORM (Specify): \_\_\_\_\_

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ★  2 Iron Chlorosis on Calcareous Soil
- Other (Specify) \_\_\_\_\_

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- 0 Mexican Bean Beetle (*Epilachna varivestis*)
- 0 Potato Leaf Hopper (*Empoasca fabae*)
- Other (Specify) \_\_\_\_\_

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Vickery	Seed Coat Luster	AgriPro 26
Leaf Shape	Vickery	Seed Size	AgriPro 26
Leaf Color	AgriPro 26	Seed Shape	AgriPro 26
Leaf Size	Vickery	Seedling Pigmentation	Vickery

## 23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

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VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
Submitted	115	2.8	96	7.8cm	10.5	38.5	18.9	12	N/D
Name of Similar Variety	116	3.4	108	8 cm	11 cm	40.0	19.5	15	N/D

## PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A<sub>2</sub> in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

ENTRY NO.	VARIETY OR LINE	MAT.	HT. (in)	LODGE (1-5)	SB YIELD	SP YIELD	MEAN YIELD	YIELD RANK	WORTH	SEED QUAL
12	78024-A81-13078	7.7	36.8	2.5	50.2	40.6	45.4	16	2.7	2.0
24	78096-A81-03112	8.7	32.7	1.5	47.4	42.0	44.7	19	1.3	2.5
03	78014-B81-16009	9.3	32.3	1.7	51.3	40.8	46.1	15	1.7	2.2
02	78014-A81-37037	9.7	31.2	1.5	53.6	40.8	47.2	9	2.0	2.2
11	78024-A81-13052	9.7	33.7	2.0	51.1	26.2	39.7	27	2.0	2.0
21	78062-B81-17042	9.7	31.2	1.3	46.9	42.7	44.8	18	1.0	2.3
26	AP 200	9.7	36.5	1.9	54.4	46.3	50.4	1	2.0	2.3
08	78018-A81-08075	10.0	29.8	2.1	50.6	45.4	48.0	6	1.0	2.0
25	78097-A81-12087	10.0	34.2	1.1	44.9	40.8	42.9	22	1.3	2.2
27	P 1677	10.3	31.3	2.1	53.8	42.6	48.2	5	2.0	2.2
04	78017-A81-03064	10.7	31.8	1.5	52.5	40.0	46.3	14	1.3	2.5
10	78021-B81-27022	10.7	34.8	2.4	51.3	27.5	39.4	25	2.3	2.0
01	78013-B81-15036	11.0	31.0	1.8	50.8	39.0	44.9	17	2.0	1.8
07	78018-A81-08049	11.0	36.2	1.8	52.4	41.0	46.7	12	2.3	2.5
17	78049-B81-09051	11.3	33.5	1.3	43.2	35.2	39.2	26	1.3	2.3
28	AP 240	11.3	33.3	1.6	48.8	23.6	36.2	29	1.0	2.0
05	78017-A81-04055	11.7	30.0	1.9	53.2	34.3	43.7	20	2.0	2.5
13	78039-A81-20065	11.7	31.2	1.7	51.1	44.7	47.9	7	1.3	2.7
23	78066-A81-26047	12.0	31.2	1.1	56.7	43.9	50.3	2	1.3	2.0
09	78020-B81-25017	12.3	31.0	1.8	51.5	44.0	47.8	8	1.3	2.0
14	78039-B81-39022	12.3	33.3	1.3	48.2	36.8	42.5	23	1.7	2.2
22	78065-B81-18057	12.3	37.2	2.0	53.2	26.6	39.9	24	2.7	2.2
20	78062-B81-16047	13.0	34.2	1.7	52.0	40.8	46.4	13	1.3	2.3
18	78059-B81-15042	13.3	37.0	2.4	53.3	41.1	47.2	10	2.7	2.0
19	78059-B81-15048	13.7	36.8	2.3	49.4	37.0	43.2	21	2.3	2.2
06	78017-A81-04058	14.0	33.3	1.8	55.2	38.9	47.0	11	1.0	2.0
16	78049-A81-24061	14.7	31.5	1.8	55.4	41.8	48.6	4	2.0	2.8
✓15	78048-A81-24060	16.3	34.9	2.3	57.9	42.3	50.1	3	2.7	2.8

MEAN 11.4 33.3 1.8 51.4 39.9 45.1 1.8 2.2  
 C.V. .0 10.3 25.2 9.0 7.7 12.2 .0 .0  
 LSD(.05) .0NS 3.9 .7 7.5 4.8 9.1NS .0NS  
 ND. OF REPS 3.0 6.0 6.0 3.0 3.0 6.0 3.0 3.0

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NICKERSON AMERICAN PLANT BREEDER  
SOYBEAN TRIAL SUMMARY REPORT 1984

OVER-LOCATION MEANS TRIAL #Y3-2301

LOCS: AM, BK, JF, HA, KI, SB, VM AM,

ENTRY NO.	VARIETY OR LINE	MAT.	HT. (in)	LODGE (1-5)	AM YIELD	BK YIELD	JF YIELD	HA YIELD	KI YIELD	SB YIELD	VM YIELD	MEAN YIELD	YIELD RANK	WORTH	SEED QUAL
17	78100-B81-03089	12.4	37.7	2.5	31.3	46.3	40.6	NSY	31.3	32.8	43.4	37.6	26	2.8	2.2
14	78066-A81-12036	12.9	33.1	1.6	31.7	44.9	38.4	NSY	NSY	30.9	43.4	37.9	25	1.5	2.8
16	78066-A81-26047	13.0	30.3	1.6	28.3	48.6	43.4	34.5	27.2	33.4	39.6	36.4	28	1.0	2.0
18	79101-B81-09137	13.2	33.8	2.0	29.9	46.9	45.3	50.3	27.5	35.0	50.5	40.8	5	2.2	1.9
01	78013-A81-33012	13.3	33.2	1.7	30.4	54.1	42.9	47.6	23.2	26.1	46.4	38.7	21	1.7	1.7
21	A2575	13.4	35.3	1.8	29.1	50.5	41.3	49.3	23.0	35.9	49.1	39.7	10	2.3	2.3
15	78049-A81-24060	14.4	32.7	2.1	33.8	39.6	50.0	49.9	26.1	30.1	48.0	39.6	13	2.3	2.9
20	KELLER	14.5	33.4	2.1	30.1	41.0	40.0	43.7	25.3	30.1	47.9	36.9	27	2.2	2.2
22	S1492	14.7	33.0	2.3	31.7	46.8	41.6	47.0	28.3	33.1	48.6	39.6	14	2.2	2.2
26	AP 240	16.3	31.3	1.6	32.1	48.1	33.4	45.1	32.3	27.0	50.2	38.3	23	1.2	2.2
04	78110-B81-12087	16.6	32.2	1.8	31.4	50.4	40.1	41.9	23.6	36.4	51.5	39.3	16	2.2	2.2
27	CENTURY	17.0	36.5	1.8	30.5	49.0	41.3	57.8	26.7	33.0	53.7	41.7	3	1.7	2.0
06	78110-A81-36178	17.3	31.1	1.7	30.8	48.1	41.8	45.1	21.9	27.1	51.9	38.1	24	1.3	2.4
07	78110-B81-11089	17.4	30.0	1.4	33.8	50.7	44.3	45.2	29.8	31.1	52.3	41.0	4	1.8	2.2
25	HP 2530	17.4	36.1	2.1	29.3	49.6	44.2	42.2	25.1	36.0	51.3	39.7	11	2.0	2.4
10	79109-B81-35172	17.8	36.0	2.0	25.2	47.7	38.4	50.2	26.8	30.7	53.8	39.0	17	1.8	2.3
23	STINE 2050	18.3	33.3	1.9	31.2	55.0	42.3	52.7	23.7	36.4	55.2	42.3	1	2.2	2.1
08	79101-B81-36081	18.4	33.0	1.9	27.1	51.5	37.1	45.3	30.1	39.0	53.9	40.6	6	1.7	1.8
02	78039-B81-39012	19.0	32.3	1.8	30.8	51.4	41.8	39.0	25.5	32.7	51.2	38.9	18	1.7	2.2
28	HS 265	19.0	32.3	1.6	29.7	51.2	42.5	39.8	29.0	33.0	52.8	39.7	12	1.8	2.5
05	78093-A81-36055	20.3	33.2	1.6	27.4	54.8	40.2	49.7	27.8	29.3	53.7	40.4	8	1.7	2.1
24	PELLA	20.8	37.0	2.0	28.9	49.3	41.3	50.6	25.3	27.0	50.1	38.9	19	2.2	2.1
19	78015-B81-18024	21.3	32.2	1.4	29.7	53.9	38.9	53.4	32.5	30.3	55.4	42.0	2	1.2	2.1
09	78067-B81-20042	22.8	37.6	1.9	29.4	48.9	36.8	48.7	25.9	NSY	52.2	40.3	9	2.0	2.5
12	79109-B81-29174	23.1	33.1	1.8	28.0	46.3	40.6	50.0	27.4	28.3	50.7	38.8	20	1.7	2.2
11	79109-B81-35179	23.2	37.3	2.1	26.4	52.0	41.8	48.3	25.6	32.7	48.8	39.4	15	1.8	2.2
03	78015-A81-40006	23.3	36.1	1.7	28.2	45.6	34.2	49.4	26.4	31.3	55.5	38.7	22	1.7	2.5
13	79101-B81-05142	23.8	36.5	2.1	26.1	48.4	39.6	51.5	27.9	35.7	55.1	40.6	7	2.0	2.3
MEAN		17.7	33.9	1.8	29.7	49.0	40.9	47.2	26.9	32.0	50.6	39.5		1.8	2.2
C.V.		8.4	7.5	16.7	6.8	6.5	10.8	14.9	16.6	10.8	8.4	11.8		37.3	16.5
LS(D(.05)		2.2	1.8	3.3	3.3	5.2	7.2	11.5	7.3	5.6	6.9	3.9		7.7	3.3
NO. OF REPS		12.0	21.0	21.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	21.0		6.0	15.0

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8900010

NICKERSON AMERICAN PLANT BREEDERS INC.  
SOYBEAN TRIAL SUMMARY REPORT 1985

LOC: HM, MD, WM, FB, SP, AI

TRIAL #CV-1001

OVER-LOCATION MEANS

ENTRY NO.	VARIETY OR LINE	HT.	LODGE (1-5)	HM YIELD	MD YIELD	WM YIELD	FB YIELD	SP YIELD	AI YIELD	MEAN YIELD	YIELD RANK	WORTH
15	DAWSON	34.2	1.9	43.6	39.9	37.7	37.9	44.5	38.9	39.3	25	3.7
16	AP120	36.8	1.8	41.6	39.9	37.7	37.9	44.5	38.9	39.3	26	3.7
17	503-90	35.9	1.7	42.3	42.1	39.7	39.9	40.5	39.9	39.7	27	3.6
18	SIMPSON	32.8	1.6	45.1	41.4	39.3	30.4	39.9	41.6	39.6	28	3.6
19	AP10	19.9	39.6	42.3	41.4	40.5	31.2	43.2	43.6	40.4	21	3.4
20	7481-80-27033	20.0	37.5	49.6	48.3	42.9	42.0	52.6	48.5	47.4	9	3.2
21	HODGSON 78	20.1	37.3	41.8	39.1	38.4	31.8	42.9	41.6	39.1	12	3.2
22	78029-B81-3806	20.2	37.7	43.5	39.7	39.8	30.4	44.5	42.0	40.0	13	3.2
23	514-60	21.4	35.3	42.8	33.8	38.7	33.3	51.5	47.3	41.3	19	3.2
24	75212-80-31101BR	21.5	39.2	48.6	51.7	48.2	39.2	50.5	50.9	47.6	4	3.2
25	7908-A81-1902	21.6	37.2	49.9	44.1	45.9	36.2	47.7	46.4	44.9	14	3.2
26	75212-80-31101TN	23.4	35.7	49.1	49.9	39.8	50.8	48.2	48.2	47.4	6	3.2
27	76136-A80-20037	23.8	37.3	46.8	43.9	44.1	54.0	48.0	48.0	46.0	11	3.2
28	MEBER	24.3	39.3	44.2	43.2	42.6	38.6	51.1	50.6	45.1	13	3.2
29	MP20-20	24.4	39.9	46.0	41.4	38.3	33.5	44.3	43.2	41.1	20	3.2
30	HARDIN	24.7	41.9	47.1	47.9	40.9	35.3	51.1	49.9	45.4	12	3.2
31	AP200	25.0	39.8	50.1	47.4	39.9	47.9	48.2	48.2	47.1	8	3.2
32	78004-A81-08007	25.2	39.3	41.3	42.0	35.7	42.7	49.4	53.0	43.2	16	3.2
33	AT937	27.0	39.6	46.9	43.2	48.3	42.7	49.4	55.5	47.7	3	3.2
34	79109-B81-26174	29.3	38.4	46.2	46.8	49.8	42.4	48.9	52.7	47.8	2	3.1
35	78048-A81-24060	29.6	41.7	50.6	50.6	51.7	44.3	53.8	54.3	51.2	1	3.1
36	P191	30.5	39.3	43.5	37.9	46.1	40.8	49.7	50.4	44.8	15	3.0
37	CORSOY 79	31.9	44.4	43.5	43.6	39.2	34.1	43.6	46.0	40.0	23	3.0
38	79101-B81-09137	32.7	39.0	45.9	43.7	49.5	42.4	47.4	48.7	46.2	10	3.0
39	51492	34.5	39.4	38.9	33.3	45.6	36.1	49.6	48.9	42.0	18	3.0
40	77054-B90-40207	35.9	37.6	40.7	43.7	44.4	44.4	49.0	50.2	46.6	9	3.0
41	74022-80-V034	37.9	40.8	46.7	38.3	48.3	43.6	51.1	54.9	47.1	7	3.0
MEAN		24.3	38.4	1.9	44.5	42.7	36.7	48.0	47.4	43.8		
C.V.		9.3	17.1	6.9	6.4	4.7	7.7	6.8	7.6	7.2		
LSD(.05)		3.3	1.6	1.3	1.4	1.4	1.6	1.1	1.9	1.3		
NO. OF REPS		12.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0		

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1986 CV-1001 SUMMARY IN MATURITY ORDER  
AI,BS,FI,SP,WM,MD,HM

ENT NO	VARIETY	MAT	HT IN	LODGE	ALGONA IA	BROOKINGS SD	FREDRICKS IA	YIELD		WELLS MN	WINDOM MN	HANSKA MN	MEAN	RANK	PER CHECK
								IA	SPENCER IA						
27	DAWSON	9.4	29.9	2.4	44.8	51.5	33.1	31.7	48.5	29.6	30.8	38.6	28	81	
11	SIMPSON	12.6	29.2	2.2	37.8	46.3	27.1	36.7	45.7	32.9	45.2	38.8	27	81	
17	AI214	18.3	36.6	2.4	43.2	51.0	45.8	38.2	49.9	35.5	40.8	43.5	21	91	
13	HODGSON78	19.7	34.2	2.4	42.5	53.0	38.7	35.8	50.7	31.0	36.7	41.2	26	86	
9	31101BR	20.3	33.9	2.0	51.2	54.3	42.1	41.4	57.9	37.7	44.7	47.0	7	98	
28	FUNK12231	21.1	32.1	2.6	46.3	47.7	40.6	37.5	54.7	39.6	37.5	42.1	25	88	
-2	79006-AB2-09040	21.2	32.5	2.2	52.4	53.6	34.9	38.9	56.9	30.5	46.7	46.1	10	96	
1	79116-AB2-03054	22.3	34.5	1.9	47.1	52.5	41.1	39.8	53.4	32.2	41.5	43.9	19	92	
12	AI525	22.3	33.5	1.9	45.6	55.8	44.2	41.7	55.6	37.9	49.0	47.1	5	98	
14	AP 1776	22.5	35.1	1.9	46.3	53.5	44.2	41.4	51.8	44.4	48.4	47.1	6	98	
15	SI4-60	22.8	33.8	2.3	48.5	48.5	46.2	38.4	58.1	38.7	41.0	45.6	13	95	
21	AI937	22.9	36.3	2.5	47.9	54.9	48.3	43.2	53.9	38.5	46.2	47.6	3	100	
5	79118-AB2-32153	23.0	37.4	2.6	46.4	49.8	47.3	39.4	52.0	35.4	37.3	43.9	20	92	
7	78048-AB1-24060	24.4	34.9	2.4	44.2	47.8	49.9	43.5	59.4	38.4	47.5	47.2	4	99	
16	PI677	24.7	36.9	2.4	44.0	52.9	38.6	37.4	54.9	24.0	44.4	42.3	24	88	
19	HARDIN	24.7	34.7	2.5	49.9	53.6	43.5	39.9	54.1	28.9	40.1	44.3	18	93	
25	SIS-50	25.0	39.9	2.4	47.4	53.7	46.1	45.0	54.5	41.6	50.8	48.4	1	101	
4	79116-882-37137	25.6	37.6	2.3	45.2	54.5	45.5	38.9	53.2	40.2	41.4	45.6	12	95	
18	HP 20-20	26.0	36.3	2.3	46.0	55.6	39.9	39.2	53.9	34.8	41.2	44.4	16	93	
22	EX 2021	26.0	35.6	2.4	50.0	51.0	44.3	40.5	56.3	34.8	42.4	45.6	14	95	
20	AP 200	26.2	39.0	2.5	44.4	50.2	40.9	36.7	53.5	32.6	39.8	42.6	23	89	
3	79025-AB2-28023	26.7	39.9	2.6	48.1	50.8	44.0	38.7	58.1	36.4	44.0	45.7	11	96	
26	A2187	26.3	38.3	2.1	46.7	52.9	42.9	37.5	52.6	33.3	45.0	44.4	17	93	
8	79118-882-06174	26.8	37.9	2.4	44.7	56.3	49.1	42.1	53.7	37.7	40.6	46.3	9	97	
23	EX 2309	26.9	37.0	2.4	48.4	45.9	47.4	41.2	50.5	34.6	44.0	44.6	15	93	
6	79038-882-12098	27.1	37.0	2.3	43.9	52.7	50.0	43.1	54.9	40.9	48.1	47.7	2	100	
10	ELGIN	27.2	32.1	2.6	44.5	46.8	51.1	42.6	55.6	36.9	48.9	46.6	8	97	
24	CORSOY 79	28.3	40.7	2.7	44.4	48.3	44.3	35.8	51.0	35.8	40.1	42.8	22	89	
MEAN		23.2	35.6	2.3	46.1	51.6	43.2	39.5	53.8	35.5	43.0	44.7			
C.V.		6.3	9.0	15.3	7.5	8.1	7.4	6.4	6.6	12.7	9.7	8.3			
LSD (5%)		1.0	2.2	0.2	5.7	6.8	5.2	4.1	5.8	7.3	6.7	2.5			
F-TEST VALUE		40.0	3.6	3.0	2.1	1.5	8.3	3.8	2.2	2.8	4.7	3.6			
NO. OF REPS		15.0	18.0	21.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	21.0			

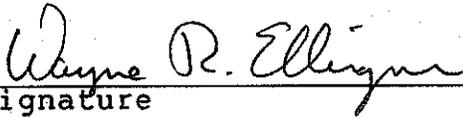
1987 CV-1001 SUMMARY IN MATURITY ORDER

8900010

VARIETY OR LINE	MAT. (1-5)	HT. (in)	LODGE (1-5)	YIELD Bu/Ac								YIELD RANK	PER CHECK	WORTH (1-5)	SQ (1-5)
				BS	HM	WM	SP	AI	MC	HI	MEAN				
HODGSON78	7.9	42.1	3.2	38.9	54.6	55.4	40.0	49.1	59.1	46.2	49.0	28	90	4.1	0.0
75212-80-31101B	8.1	41.6	1.9	52.7	56.0	53.3	41.9	49.6	58.7	46.8	51.3	24	95	2.8	0.0
A1214	8.2	43.4	2.8	38.3	56.8	52.2	43.0	53.5	58.7	41.3	49.1	27	90	3.7	0.0
FUNK12231	8.9	39.0	2.3	41.4	59.9	51.9	47.8	54.1	60.2	33.7	49.9	26	92	2.8	0.0
AP 1776	9.9	41.4	1.5	50.8	62.4	59.4	49.2	55.8	59.4	50.7	55.4	11	102	2.5	0.0
80158-A83-40086	11.5	40.8	1.8	44.5	60.4	57.4	49.2	56.2	64.5	52.2	54.9	16	101	2.8	0.0
A1525	11.7	43.1	1.6	44.4	64.3	59.6	50.3	53.1	61.1	52.4	55.0	15	101	2.9	0.0
P1677	11.9	42.6	2.4	48.8	65.9	60.2	50.6	54.8	63.9	44.3	55.5	9	102	3.4	0.0
A1937	12.2	43.3	2.5	43.3	61.7	58.4	47.6	53.6	62.7	50.4	54.0	19	100	3.2	0.0
S14-60	12.7	40.3	2.1	44.7	62.8	60.4	52.4	56.4	62.4	48.0	55.3	13	102	2.7	0.0
80160-A83-32142	13.4	42.9	2.2	51.7	64.4	57.0	49.9	54.4	61.6	49.8	55.5	8	102	3.2	0.0
80159-A83-38141	13.5	36.4	1.5	48.1	56.0	55.7	48.9	57.8	60.9	49.8	53.9	20	99	2.5	0.0
HARDIN	13.5	45.8	3.7	41.4	63.0	54.6	46.1	55.5	65.4	49.8	53.7	22	99	4.5	0.0
✓ 78048-A81-24060	14.0	43.0	2.9	48.5	65.0	60.7	54.7	56.9	68.5	51.1	57.9	2	107	3.9	0.0
S15-50	15.2	48.7	2.4	42.6	61.7	60.5	53.0	56.1	67.0	49.1	55.7	7	103	3.2	0.0
AP 200	15.5	44.1	2.9	38.8	61.3	61.4	52.3	55.6	63.8	52.9	55.2	14	102	3.8	0.0
A2187	15.7	45.9	2.2	42.4	60.3	54.2	50.9	56.3	63.0	50.0	53.9	21	99	3.3	0.0
AP 2021	16.5	43.6	2.3	44.3	59.3	60.1	50.0	55.3	62.3	52.3	54.8	17	101	2.9	0.0
80159-A83-34152	17.2	44.2	1.5	44.9	58.0	52.0	48.8	53.9	61.4	49.8	52.7	23	97	2.2	0.0
STINE2510	17.6	40.8	2.5	46.3	63.3	64.0	48.2	59.4	64.6	48.5	56.3	5	104	3.1	0.0
80168-B83-10235	18.3	42.2	2.2	43.7	59.8	61.0	52.6	56.1	64.9	49.7	55.4	10	102	2.1	0.0
79038-B82-12098	19.8	45.3	2.2	40.5	65.1	59.4	56.6	60.2	69.4	42.2	56.2	6	104	2.9	0.0
AP 2190	19.8	45.1	2.8	46.6	64.2	61.4	55.1	58.4	68.5	53.6	58.3	1	107	3.2	0.0
CORSOY79	19.9	47.6	3.4	33.2	64.8	55.2	53.8	55.8	64.1	51.5	54.1	18	100	4.4	0.0
80140-A83-09092	20.3	42.0	1.6	43.6	66.9	60.1	57.6	58.2	64.2	52.4	57.6	3	106	1.2	0.0
80122-B83-09094	20.9	43.8	2.3	46.8	58.8	59.6	52.5	57.2	64.2	47.9	55.3	12	102	2.4	0.0
ELGIN	20.9	41.2	2.5	41.4	67.7	65.1	49.5	58.0	68.2	52.9	57.5	4	106	1.4	0.0
80170-B83-18237	24.6	39.6	2.1	23.8	58.0	52.9	51.6	59.2	62.6	49.6	51.1	25	94	1.7	0.0
MEAN	15.0	42.9	2.3	43.4	61.5	58.0	50.1	55.7	63.4	48.9	54.4	0	00	2.9	0.0
C.V.	12.7	6.0	14.4	11.7	7.4	7.1	6.8	4.7	4.7	6.2	6.9	0	00	0.0	0.0
LSD (5%)	1.1	1.8	0.2	8.3	7.5	6.7	5.5	4.2	4.8	4.9	2.5	0	00	0.0	0.0
F-TEST VALUE	26.0	4.4	11.3	3.8	1.7	2.3	4.2	2.8	3.0	5.9	3.4	0	00	0.0	0.0
NO. OF REPS	15.0	20.0	20.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	21.0	0	00	18.0	0.0

## "EXHIBIT E"

Nickerson American Plant Breeders, through various changes in corporate structure and purchases, are sole owners of the assets of the previous companies North American Plant Breeders and AgriPro, Inc. The ownership comprises all the soybean genetic material, including the variety AP 1989.

  
Signature

Wayne R. Ellingson

Director of Oilseeds Research